Tree Protection Report

For

Coastal Christian School
New Campus Construction

Oak Park Road, Pismo Beach, California

August 12, 2008

By

Carolyn Leach Consulting, L.L.C.
444 Blume Street, Nipomo, California 93444
Phone & fax # (805) 929-9020

Carolyn B. Leach
Signed

8/20/08
Date

Introduction:

This report reviews the proposed construction of a new campus for the Coastal Christian School in Pismo Beach, and the affect of the construction project on existing native oak trees. The project site is 27 acres in size. The site was heavily graded in the 1970's for a previous project that was abandoned. Many flattened terraces were created, and some tree roots were impacted.

Many dozens of oak trees exist on the site, with many mature trees located along the east, north, and south boundaries of the property. Many younger oaks are found in various areas. For this report, only oaks with trunks larger than 6 inches in diameter have been included. The property is also heavily wooded in many areas with other species of trees, including willow and black acacia.

The new construction is to take place in a phased manner over the course of several years. Several buildings will be constructed that will house classrooms, administrative rooms, chapel, auditorium, gymnasium, kitchen, and storage rooms. The grounds will be developed to include sports fields, play fields, sports courts, gardens, and parking areas.

This report includes specific tree information for the Phase One portion of the project. This phase will be the construction of Buildings #1, 2, 3, and 4 as well as the main entry parking lot. Additional parking will be constructed that surrounds Building #7, and the pad for that building will be utilized for construction storage. A driveway will be built around the west side of Buildings #5 & 6 but not the parking stalls adjacent to the drive. Exhibit A identifies the areas of the property included in Phase One.

The plan reviewed by the Arborist for this report is the Master Plan, by AAC, dated July 2008. Subsequent to this plan, the designers have mitigated much of the tree impacts by moving or deleting improvements. This has allowed for an additional 22 tree to remain.

The Project Arborist will review the remaining phases of work as the project progresses. The protocol for these additional tree assessment is set forth in this report.

Phase One Tree Information:

The oak trees within and near the work area of the Phase One project were inspected on July 30, 2008. Information was collected regarding tree location, trunk size, and vigor status.

The Master Plan was used to assess the approximate amount of impact to the trees located close to the construction. It was determined that many of the trees are located in remote portions of the property that will remain undeveloped, and will not be affected by the project. Therefore, they were not individually assessed. Examples of these areas are the lower half of the eastern most slope and the upper half of the southwestern slope.

The information collected is presented in the Field Inspection Summary form (Exhibit B). The total impacts are listed below:

Approximately 117 oaks are present in the Phase one area

15 oaks will be removed – all are under 10" trunk diameter

One additional oak is recommended to remove because of disease

Total oaks to remove is 16

To ensure that this information remains accurate, the Arborist will review the grading proposals with the project Engineer prior to finalizing the Grading Plan. Additional mitigation may be required.

Protocol for future construction phases:

1. Obtain Master Plan Information

The Master Plan defines which buildings will be included in each phase of work. In addition to the buildings, portions of the site will be developed as part of each phase.

The Arborist will visit the site and note the trees located within the new building and site work locations. All trees to be removed will have trunk diameters measured. Additionally, make note of any trees that will be partially affected by either canopy or root loss. The percentage of the impact will be determined for each tree and recorded.

The information collected regarding the affected trees will be compiled in the supplemental report.

2. Determine Additional Areas

The Arborist will confirm with the owner's representatives the additional site areas that will be developed as part of the next phase. Make note of the locations of the following items:

Grading cuts, fills, & retaining walls
Paving
Landscaping
Construction equipment access
Storage areas, staging areas & location of job trailers
Construction employee parking
Utilities, above and below ground
Storm drains & retention basins

The Arborist shall review the additional areas in the next construction phase and determine whether any additional trees are affected. These trees shall be added to the supplemental report.

3. Identify Tree Locations and Removals

All trees included in the supplemental report will have their locations indicated on a sketch. The sketch will include locations of buildings and paving proposed for that phase. Trees to be removed will be clearly marked.

Provide a table within the supplemental report that indicates the total number of trees removed, their trunk diameters, as well as any trees partially affected by the construction and the percent of impact.

The Arborist, with the assistance of the general contractor, will field tag the trees to be removed, prior to start of any construction. This should occur following site surveying but before start of clearing and grubbing work. The contractor is to confirm with the Arborist in the field which trees are approved for removal.

In some cases, willows and other plants will need to be removed in the same area that oak tree roots will need protection. In such instances, the plants will be removed by hand cutting (not by heavy equipment) and their stumps treated with an appropriate herbicide to prevent stump sprouting.

4. Protective Fencing

The Arborist will determine the locations for protective fencing between all construction activities and existing native oaks. The fencing will be indicated upon the final grading and site plans for the phase.

Restrictions within the protected areas are presented within this initial report. These include the limits to activities within the protected area and the conditions the fence may be moved or removed. The Arborist will include the restriction verbiage within any supplemental report.

5. Pre-bidding Requirements

The project Engineer will ensure that all tree protection requirements are included within the documents made available during the bidding process.

6. Pre-Construction Meeting

A pre-construction meeting will be held prior to the start of any construction activity for each new phase. The Arborist, general contractor, grading contractor, underground utility contractor(s), and landscape contractor will be present. The Arborist will present all pertinent information regarding tree removal, tree protection, and tree or root pruning methods. The general contractor will be responsible for implementing the tree protection measures on a daily basis at the project site.

7. Construction Monitoring

The Arborist will make regular visits to the project during the course of construction for each phase – approximately twice per month during grading and underground work and at least once per month during building construction. The

Arborist will meet briefly with general contractor to answer questions and review future work that may impact the trees.

The general contractor may require additional site visits of the Arborist when there is a conflict between the project plans and the trees.

The Arborist will complete a written field report following each site visit. Copies of the field report will be provided to the project owner and the general contractor. Exhibit C indicates the field report form to be used by the Arborist.

Tree Pruning, Root Pruning and Other Requirements

Branches less than 1 inch in diameter may be pruned by construction personnel, so long as they are not within the tree protection zones.

Branches over 1 inch in diameter are to be pruned in the presence of the Project Arborist or by ISA Certified Arborist or Certified Tree Worker.

National Standards (A.N.S.I. #A-300, Z-133) for pruning and tree care shall be used at all times.

No more than 30% of the canopy of any oak tree may be removed unless the project Arborist reviews and approves the work and sufficient mitigation is provided.

If living roots of native oaks, measuring two inches in diameter or more, are injured during earthwork or trenching, the contractor shall cleanly cut them. Use a sharp handsaw or power reciprocating saw to remove the frayed end. Do not paint the cut ends of roots. The excavation shall be backfilled as soon as possible.

The Arborist may determine that areas of significant root loss may need additional protection until the disturbed soil is backfilled. Mitigation may include keeping the soil moist with plastic sheeting or burlap, wetting the area regularly, and providing additional wood chip mulch.

No more than 30% of the entire root system of any healthy oak tree may be removed. For oak trees with poor vigor prior to start of the project, a lower threshold will be determined by the Arborist.

All areas beneath oak trees will maintain existing grades. The surrounding grades shall be set so that no new runoff or drain pipes discharges into oak root areas. Additionally, positive drainage away from oak root areas will be maintained. No runoff will be allowed to pond up beneath oak trees.

New landscaping, when installed near oak roots, will be drought tolerant and receive minimal irrigation. No turf will be installed close to oak root areas. The Arborist will review and approve landscape plans prior to installation.

Protective Fence Requirements:

- Project manager and general contractor shall be responsible for instructing all workers about tree protection goals, implementing protection of the tree protection areas, and installing and maintaining protective fencing.
- Protective fencing is required, in the locations shown on the grading plan, and approved by the project arborist.
- The fences shall be orange plastic fencing, at least four feet tall, supported by steel "T-posts", no more than eight feet apart, driven solidly into the ground. Metal wire (#17 gauge) shall be woven into the second uppermost row of fencing holes and tied to each post to provide additional support for the plastic fencing.
- The fencing shall be installed prior to any site disturbance or construction for the applicable phase of work, and shall remain in place until all construction is complete.
- Do not move or remove the fence without prior approval of the Arborist.
- No grading, trenching, materials storage, soil storage, debris, or site disturbance shall occur within the protected areas. No driving or parking of vehicles or equipment shall occur within the protected areas.
- No concrete, plaster, grout, or paint washout or rinse water shall be allowed within the tree protection zone.
- Weather-proof signs shall be permanently posted, on the fences ever 50 feet, with the following information:

TREE PROTECTION ZONE
No personnel, equipment, materials, or vehicles are allowed.
Do not move or remove this fence.

Name & Phone # of Construction Supervisor

- Any field conditions or changes, which adversely affect the site trees, shall be reviewed by the project arborist prior to performing the work. Additional mitigation may be needed.
- All utilities shall be routed in areas outside the tree protection areas.

EXHIBIT A

(Insert reduced Master Plan with Phase One outlined)

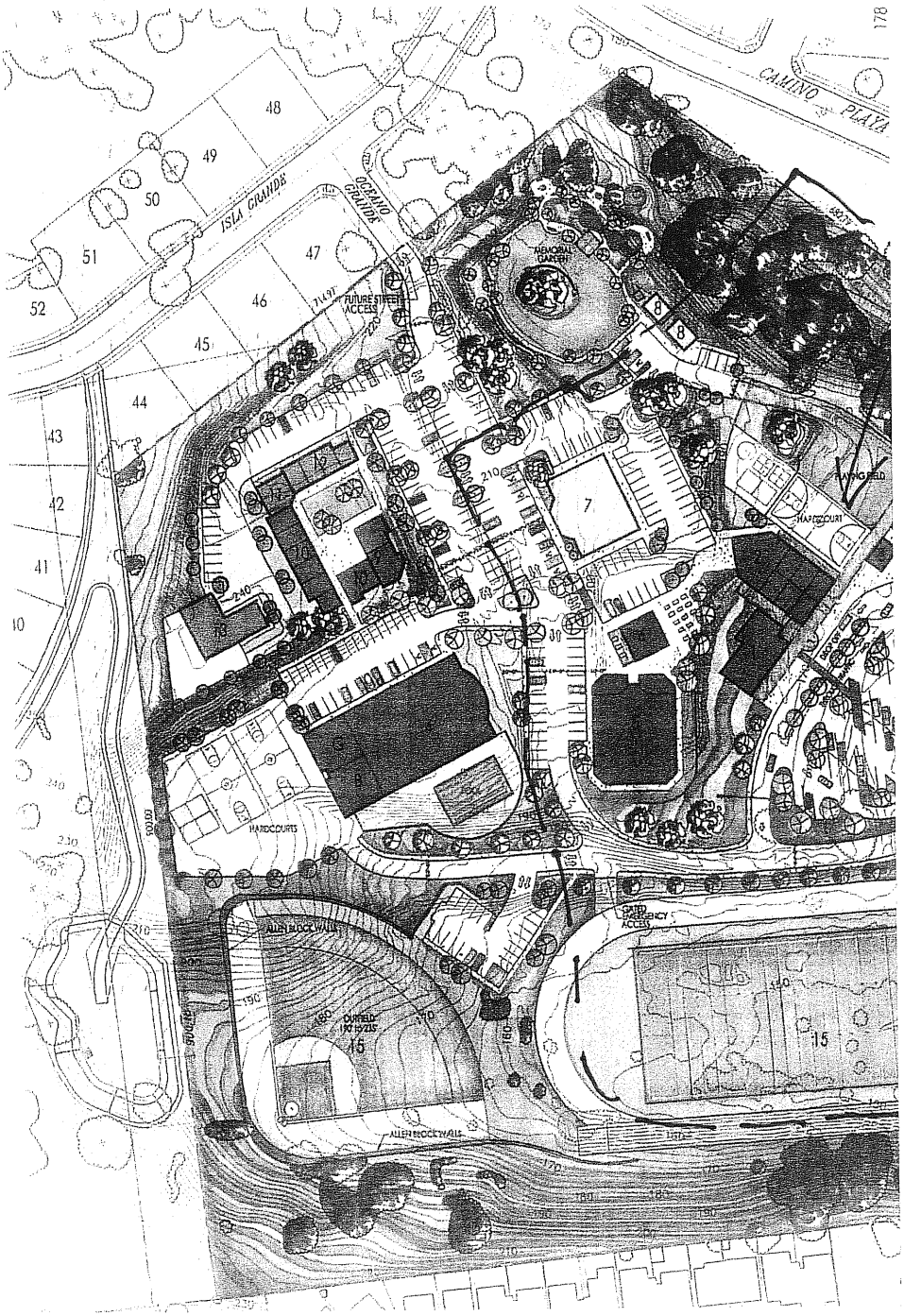

EXHIBIT B

Field Inspection Summary, Phase One

1. Approximate total number of oak trees (including remote locations): 117

2. Total number of oak trees adjacent to project areas: 71

   Trees with moderate to excellent vigor: 67

   Trees with poor to very poor vigor: 4

3. Trees to be removed: 15

   Size range: All from 6" to 10" in diameter

4. Number of trees remaining with canopy impacts over 30% = 3

   Number of trees remaining with root impacts over 30% = 9

5. Additional tree recommended to remove = 1

   Note – this tree is located at the northwest corner of building #7, Arborist recommends removal due to extensive disease and decay

EXHIBIT C

ARBORIST FIELD REPORT
Coastal Christian School
New Campus Construction
Oak Park Road, Pismo Beach, California

ARBORIST: _____

DATE: _____

OBSERVATIONS:

RECOMMENDATIONS:

Signed: _____

COPY TO: Coastal Christian School
County of San Luis Obispo Planning Department
General Contractor
Project Architect